

**APPENDIX V**

**Serial No.: 09/955,604**

**Docket No.: 49933US032**

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**Office Action mailed from the U. S. Patent and Trademark Office on July 22,  
2002.**



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,604	09/19/2001	Timothy L. Hoopman	49933US032	1214

7590 07/22/2002

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
P.O. Box 33427  
St. Paul, MN 55133-3427

EXAMINER

LEYSON, JOSEPH S

ART UNIT

PAPER NUMBER

1722

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

1-D

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/955,604	HOOPMAN ET AL
	Examiner	Art Unit
	Joseph Leyson	1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 30 April 2002.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 23,24,30-32,56,57,63,64,89,90,92,93,113,114 and 133-153 is/are pending in the application.
  - 4a) Of the above claim(s) 56,57,63,64,113,114 and 149-153 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 23,24,30-32,89,90,92,93 and 133-148 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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1. Applicant's affirmation of the election with traverse of Group I, apparatus claims 23, 24, 30-32, 89, 90, 92, 93 and 133-148, in Paper No. 5 filed on 30 April 2002 is acknowledged. The traversal is on the ground(s) that the inventions as claimed can be readily evaluated in one search without undue burden on the Examiner. This is not found persuasive because the search and examination of both inventions would not be coextensive. The issues raised in the examination of apparatus claims are divergent from those raised in the examination of process claims. Further, while there may be some overlap in the searches of the two inventions, there is no reason to believe that the searches would be identical. Therefore, based on the additional work involved in searching and examining both distinct inventions together, restriction of the distinct inventions is clearly proper.

The requirement is still deemed proper and is therefore made FINAL.

2. This application contains claims 56, 57, 63, 64, 113, 114 and 149-153 drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

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3. Claims 133, 137 and 144 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 133 is redundant to claim 92 because if at least one of the base edge lengths of the first plurality is different from all of the base edge lengths of the second and third plurality and if at least one of the base edge lengths of the second plurality is different from all of the base edge lengths of the first and third plurality, then it is INHERENT that at least one of the base edge lengths of the third plurality is different from all the base edge lengths of the first and second plurality.

Claim 137 is redundant to claim 136 because if at least one of the base edge lengths of the first row is different from all of the base edge lengths of the second and third rows and if at least one of the base edge lengths of the second row is different from all of the base edge lengths of the first and third rows, then it is INHERENT that at least one of the base edge lengths of the third row is different from all the base edge lengths of the first and second rows.

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Claim 144 is redundant to claim 143 because if at least one of the base edge lengths of the first plurality is different from all of the base edge lengths of the second and third plurality and if at least one of the base edge lengths of the second plurality is different from all of the base edge lengths of the first and third plurality, then it is INHERENT that at least one of the base edge lengths of the third plurality is different from all the base edge lengths of the first and second plurality.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 23, 30, 31, 89, 92 and 133-148 are rejected under 35 U.S.C. 102(b) as being anticipated by Rochlis(-583).

Rochlis(-583) teaches a production tool suitable for use in manufacturing an abrasive article (col. 1, lines 50-56) which includes a plurality of cavities having different geometric shapes, angles and dimensions. The production tool can be a coating roll (fig. 19) or an etched (engraved) metal roll (col. 3, lines 52-63; col. 13, lines 15-17 and 62-67). The production

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tool can have parallel rows of cavities as shown in figs. 21 and 22 with a first plurality of rectangular cavities, a second plurality of circular cavities, and a third plurality of triangular cavities. At least one of the angles or base edge lengths of the first plurality is different from all the angles or base edge lengths of the second plurality and of the third plurality. At least one of the angles or base edge lengths of the second plurality is different from all the angles or base edge lengths of the first plurality and of the third plurality.

Rochlis(-583) discloses that the cavities of the production tool can have different sizes (col. 2, lines 66-70; col. 6, lines 17-22; col. 9, line 61, to col. 10, line 52; i.e., different heights). Rochlis(-583) discloses that the cavities and products can have pyramidal or truncated pyramidal shapes (i.e., figs. 10-13; col. 13, lines 51-58). Rochlis(-583) discloses that the production tool can have a plurality of different types (shapes) of cavities (col. 13, lines 29-35). Figs. 21 and 22 show a first row of cavities with a rectangular cross section which defines a first base edge length extending parallel to the first row and a second base edge length extending perpendicular to the first row, wherein the second base length of all the cavities in the first row is the same (of course they also can be different sizes as mentioned above), and show a first

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rectangular cavity adjacent a second circular cavity, the second circular cavity being adjacent a third triangular cavity. Each of the cavities has a single opening.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 23, 24, 31, 32, 89, 90, 92, 93 and 133-148 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rochlis(-583).

The 102 rejection above is based upon the interpretation of the alternatives for the production tool disclosed by Rochlis(-583) as being anticipatory. If applicants believe that the disclosed alternatives are NOT anticipatory, then it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of Rochlis(-583) with the alternatives disclosed by Rochlis(-583) because Rochlis(-583) explicitly discloses that the production tool can be modified with such disclosed alternatives.

Rochlis(-583) discloses a production tool, as mentioned above, having 3 different types or shapes of cavities defining three pluralities or groups of cavities (figs. 21 and 22), but does NOT explicitly disclose a fourth plurality or group of cavities having a fourth different type of cavity. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool to have four pluralities or group of cavities having four different types of cavity because Rochlis(-583) discloses that the production tool can have a plurality of different types of cavities and/or because Rochlis(-583: figs. 21 and 22) discloses

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a production tool example having not just two but three pluralities or groups of cavities having three different types of cavities. Note that different shapes will read on the respective instant claims. For example, if the three different types had cross sections of a square, a pentagon, and a hexagon, then each of the cavities would have a boundary defined by at least four surfaces wherein adjacent planar surfaces of one cavity meet at an edge to define an angle of intersection therebetween, wherein the at least one angle of intersection of the first cavity is different from all the angles of the second and third cavities, and wherein at least one angle of intersection of the second cavity is different from all the angles of intersection of the first and third cavities. Various different types would also provide different base edge lengths.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 23, 24, 30-32, 89, 90, 92, 93 and 133-148 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 in view of Rochlis(-583). Claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 disclose the production tool substantially as instantly claimed. Rochlis(-583) discloses a production tool as mentioned above. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the production tool of claims 17, 20, 21, 25-28, 33-54, 94-96 and 98-111 of copending Application No. 09/520,032 such that the cavities have a first, second, third, or more plurality of cavities, each plurality having a different shape because such a modification would produce a product having a first, second, third, or more plurality of different shapes on the product as disclosed by Rochlis(-583). Note that the possible different shapes and combinations thereof disclosed by Rochlis(-583) would provide the dimensions, planar surfaces, angles, edges, boundaries and shapes as recited by the instant claims.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that Rochlis(-583) does not disclose each cavity having a single opening. The examiner respectfully disagrees. The examiner does agree that the mold disclosed by Rochlis(-583) in figs. 21 and 22 is a laminate construction and that each layer has multiple openings. The multiple openings of each layer correspond to the multiple cavities. And, when the layers are assembled to form the mold, corresponding multiple openings define a single cavity having a single opening. Thus, the layers separately have multiple openings, whereas a single cavity has a single opening. If there are any openings between the layers, they are used for venting. These vent openings are part of the mold, and are NOT part of the mold cavity.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (703) 308-2647. The examiner can normally be reached on M-F(8:30-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan Silbaugh can be reached on (703) 308-3829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

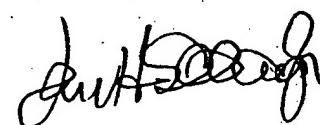
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

QH

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July 18, 2002



JAN H. SIRBAUGH  
SUPERVISORY PATENT EXAMINER  
ART UNIT 1722

